

Customer No.: 31561
Docket No.: 12447-US-PA
Application No.: 10/708,489

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed January 03, 2007. Reconsideration and allowance of the application and presently pending claims 1-6 are respectfully requested.

Discussion of Claim Rejections – 35 U.S.C. § 102

The Office Action rejected claims 1 and 5-6 under 35 U.S.C. 102(b) as being anticipated by Houghton et al US 6,429,730.

Applicants respectfully traverse the rejections of Claims 1 and 5-6 under 35 U.S.C. 102(b) because Houghton does not teach every recitation of these claims. For example, Houghton does not disclose a voltage regulator apparatus having "a first transistor having ...a third terminal directly coupled to the output terminal of the voltage regulator; and a second transistor having ... a third terminal coupled to a negative terminal of the voltage source" as recited in Claim 1.

In order to properly anticipate Applicant's claimed invention under 102, each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Further, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See MPEP §2131, quoting Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed.

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Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." See MPEP § 2131.

In rejecting Claim 1, the examiner asserts "the bias circuit 24 reads on the voltage regulator apparatus, the reference generation stage 30 reads on the voltage regulator and the transistors 60 and 54 read on the first and second transistors.

Houghton's FIG. 4 schematically shows a structure of the bias circuit 24. The bias circuit 24 includes a reference generation stage 30 and a current drive stage 32. Transistors 34, 36, 38 and 40 comprise a voltage divider circuit, so that the voltages at nodes 48 and 50 are reference voltages (i.e. nodes 48 and 50 are output terminals of the stage 30). Vout 64 is roughly divided across transistors 60 and 54 and in between the voltages at nodes 48 and 50 (for example, Vout is 1.6V). Transistors 58 and 56 form a 4:1 current mirror.

Although the circuit disclosed by Houghton uses the reference generation stage 30 and the current drive stage 32 to generate a fixed and stable reference voltage Vout 64, the elements and the arrangements thereof are not same as those recited in Claim 1 of the application.

First, the third terminal (source terminal) of the transistor 60 is directly coupled to the output terminal Vout 64 of the bias circuit, not directly coupled to the output terminal (nodes 48 or 50) of the reference generation stage 30 because the output

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terminal Vout 64 of the bias circuit 24 is not the output terminal (nodes 48 or 50) of the reference generation stage 30.

Secondly, the third terminal (drain terminal) of the transistor 54 is coupled to the gate terminal of the transistor 58 and the drain terminal of the transistor 56, not coupled to a negative terminal of the voltage source.

Thirdly, in rejection of claim 1 based on Houghton's FIG. 4, the transistors 58 and 56 in stage 32 are omitted by the Examiner. The transistors 58 and 56 are necessary because they form a 4:1 current mirror for determining the I-V characteristic of the output. The reference must be considered as a whole. And also, the transistors 58 and 56 cannot be considered as a part of the stage 30 because Houghton does not teach so. However, in Claim 1 of the application, no current mirror is recited.

Accordingly, Houghton does not disclose a voltage regulator apparatus having "a first transistor having ... a third terminal directly coupled to the output terminal of the voltage regulator; and a second transistor having ... a third terminal coupled to a negative terminal of the voltage source" as recited in Claim 1.

Because Houghton does not teach each and every recitation of claim 1, Applicants request that the rejection of this claim under 35 U.S.C. 102(b) be withdrawn and the claim allowed.

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Claims 5-6 depend from claim 1. As explained, claim 1 is distinguishable from the cited art. Accordingly, claims 5-6 are also distinguishable from this reference for at least the same reasons set forth in connection with base claim 1. Further, this reference fails to teach or suggest the recitations of claims 5-6.

Accordingly, because Houghton fails to teach all of the recitations of claims 5-6, Applicants respectfully request that the Examiner withdraw the rejection of these claims under 35 U.S.C. 102(b) and allow the claims.

Discussion of New Claims

Applicants respectfully submit that New Claims 9-15 are allowable because New Claims 9-15 are distinguishable over the cited reference. Further, Houghton fails to teach a voltage regulator apparatus having "a voltage regulator ... comprising an error amplifier for receiving the reference voltage; a first transistor having ... a third terminal directly coupled to the output terminal of the voltage regulator; and a second transistor having ... a third terminal coupled to a negative terminal of the voltage source" as recited in Claim 9.

Because Houghton does not teach each and every recitation of claim 9, Applicants request that Claim 9 should be allowed.

Claims 10-15 depend from claim 9. As explained, claim 9 is distinguishable from the

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cited art. Accordingly, claims 10-15 are also distinguishable from this reference for at least the same reasons set forth in connection with base claim 9. Further, this reference fails to teach or suggest the recitations of claims 10-15.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-6 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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